Chemical Name ; 1,4-Dihydroxyanthraquinone

Synonym ; Quinizarin
1,4-Dihydroxy-9,10-anthracenedione
C.I. 58050
C.I. Solvent Orange 86
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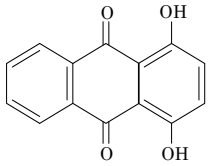
C.I. ｿﾙﾍﾞﾝﾄ ｵﾚﾝｼﾞ-86

Molecular Weight ; 240.22
Melting Point ; 198-199℃[Aldrich]
Boiling Point ; －
Flashing Point ; －
Molecular Formula ; $C_{14}H_8O_4$

Chemical Structure



CAS No. ; 81-64-1
MITI No. ; (4)-704, (5)-5055
ML No. ; －
Specified Chemical Substances ; －

Source of Substance; Tokyo Kasei Kogyo Co., Ltd.
Lot No. ; GD01
Purity ; 97.3%

Vehicle ; DMSO

Mutagenicity in Bacterial Test ; Positive

IARC Evaluation ; not yet cited

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvr*A		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(149)	(131)	(9)	(9)	(22)	(25)	(20)	(24)	(7)	(9)
	130	134	7	8			20	18	8	10
	151	122	5	3			30	21	8	20
1 .22	(141)	(128)	(6)	(6)	( )	( )	(25)	(20)	(8)	(15)
	146	146	10	11			21	23	7	17
	158	149	13	6			24	23	6	13
4 .88	(152)	(148)	(12)	(9)	( )	( )	(23)	(23)	(7)	(15)
	156	171	15	8			16	32	11	23
	144	186	11	5			14	22	14	17
19 .5	(150)	(179)	(13)	(7)	( )	( )	(15)	(27)	(13)	(20)
	164	153	8	11			16	26	23	29
	173	159	5	8			16	35	21	31
78 .1 †	(169)	(156)	(7)	(10)	( )	( )	(16)	(31)	(22)	(30)
					14	26				
					18	17				
156 †					(16)	(22)				
	153	151	12	9	26	17	15	44	23	34
	164	153	7	12	19	20	14	32	18	35
313 †	(159)	(152)	(10)	(11)	(23)	(19)	(15)	(38)	(21)	(35)
					21	24				
					21	25				
625 †					(21)	(25)				
	165	165	7	8	14	16	19 *	25 *	20	39
	143	147	5	10	15	27	19 *	33 *	27	39
1250 †	(154)	(156)	(6)	(9)	(15)	(22)	(19 *)	(29 *)	(24)	(39)
					21	27				
					23	24				
2500 †					(22)	(26)				
	172 *	171 *	4 *	10 *	26 *	23 *	11 *	31 *	29 *	33 *
	157 *	164 *	6 *	10 *	21 *	27 *	11 *	16 *	32 *	43 *
5000 †	(165 *)	(168 *)	(5 *)	(10 *)	(24 *)	(25 *)	(11 *)	(24 *)	(31 *)	(38 *)
Judgement	－	－	－	－	－	－	－	－	+	+
Specific Mutagenicity									192	564
Positive Control	AF-2 (629)	2-AA (1130)	NaN_3 (227)	2-AA (195)	NaN_3 (227)	2-AA (195)	AF-2 (322)	2-AA (385)	9-AA (631)	2-AA (139)

* Growth inhibitation was observed.
† Test chemical was precipitated with and without S9mix.

Conc. μg/plate	Number of Revertants/plate									
	Base-substitution						Frame-shift			
	TA100		TA1535		WP2*uvr*A		TA98		TA1537	
	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+	S9−	S9+
DMSO	(136)	(145)	(5)	(10)	(18)	(24)	(10)	(18)	(4)	(8)
4 .88									10 5 (8)	7 10 (9)
9 .77									13 8 (11)	13 8 (11)
19 .5									22 14 (18)	21 22 (22)
39 .1							18 14 (16)	25 15 (20)	18 20 (19)	29 18 (24)
78 .1 †							17 12 (15)	17 17 (17)	16 16 (16)	26 28 (27)
156 †	163 172 (168)	182 174 (178)			18 17 (18)	20 26 (23)	6 14 (10)	23 23 (23)	16 13 (15)	24 35 (30)
313 †	179 183 (181)	205 216 (211)	7 6 (7)	6 6 (6)	16 17 (17)	19 17 (18)	17 24 (21)	19 23 (21)		
625 †	161 191 (176)	208 214 (211)	3 8 (6)	6 8 (7)	18 18 (18)	25 13 (19)	10 11 (11)	14 10 (12)		
1250 †	165 166 (166)	195 209 (202)	6 5 (6)	5 11 (8)	19 19 (19)	25 15 (20)	14 * 20 * (17 *)	25 * 24 * (25 *)		
2500 †	170 186 (178)	200 156 (178)	7 8 (8)	11 10 (11)	22 19 (21)	23 22 (23)				
5000 †	143 * 144 * (144 *)	195 * 183 * (189 *)	10 * 7 * (9 *)	4 * 9 * (7 *)	22 * 20 * (21 *)	27 * 22 * (25 *)				
Judgement	−	−	−	−	−	−	−	−	+	+
Specific Mutagenicity									820	143
Positive Control	AF-2 (634)	2-AA (1187)	NaN_3 (267)	2-AA (241)	AF-2 (204)	2-AA (935)	AF-2 (374)	2-AA (413)	9-AA (511)	2-AA (143)